**Key lessons from scaling up vegetable technologies in Karatu District, Tanzania**

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**Background**

This document presents key lessons from the partnership between the World Vegetable Center and the development partners to scaling up the adoption of vegetable innovations in Karatu district in Tanzania in 2020. This technology scaling was conducted under the Africa RISING ESA project. Africa RISING expands or replicates validated technologies to reach more people and to broaden the effectiveness of the intervention facilitated by project partners in Karatu district and beyond. The objective is to successfully enable more small-scale farmer communities in Tanzania to capture nutritional, healthy and economic benefits of vegetables through using adapted and high perfuming vegetable varieties, robust agronomic practices and appropriate interventions which promote production in a sustainable manner. The Innovations considered for scaling includes, good quality seeds, healthy seedlings, Good Agronomic Practices (GAP) and best household nutrition practices.

**Methodology/scaling process**

Drivers

The drivers are key factors in the scaling of innovations. WorldVeg in collaboration with local champions which include local government, extension agents, farmer group leaders, local and religious leaders identified the gaps, constraints and opportunities for vegetable production and household consumption in Karatu. These helped to select innovations which best achieve the impact based on the community need. Through team work and collaboration, WorldVeg and AfricaRising project partners including Kilimo Endelevu/IDP, RECODA, local leaders and farmers joined hands to promote and scale the technologies which were developed.

Spaces

A strong organizational capacity represented by project partners, played a major role in the scaling process. Through TOT trainings conducted to Island of peace (IOP) partners; technical staff, lead farmers and the Government officials at different levels contributed to increase number of knowledgeable and skilled trainees who in turn train others to adopt and scale out the technologies. On sustainable vegetable production, postharvest good practice and nutrition messages. The TOTs take lead in training other farmers in their village and outside the villages through demonstrations trials following the Farmer Field Schools approach, Farmer field days, and learning materials on improved innovations. Mass communication such as radio program, TV and success stories are all use as spaces for scaling- up technologies/innovations. Emphasis was placed on involving women farmers as technical innovators particularly in the production, postharvest, nutrition and vegetable utilization and recipe preparations.

Pathways

Sensitization meetings and farmer training around the demonstration plots play a crucial role in building farmers’ trust and confidence as well to facilitate first adoption and scaling of the innovations. Improved technologies such as use of good quality seeds, healthy seedlings and Good Agronomic Practices (GAP) ensure increased yield, consumption of nutritious vegetable food and income; and are a vital part of scaling the project outputs. Monitoring and evaluation and learning provide room for improving the technologies and developing new solutions based on new constraints identified.

Results

Working in close collaboration with development partners, namely IDP, RECODA, local government, extension agents, and lead farmers, the implementation of farmer field schools through the demonstration plots together with trainings on GAP, postharvest, nutrition education, community sensitizations, and field days, have contributed to create awareness and increased participation, adoption and scaling of innovations from 323 farmers (50.4% males; 49.6% female) in 2019 to 744 (58% male and 42% males) beneficiaries and three institutions in 2020. The data revealed that there is an increase of 421 (64% males; 46% female) adopter farmers and 3 institutions participating and applying one or more technologies from 2019 to 2020 in 1st generation villages in Karatu district.

Lessons

* One of the key lessons learned from scaling-up is that trust-building and commitment among all stakeholders, including lead farmers, was a crucial success factor in the technology scaling process.
* Step by step the process revealed that delivering and validating a technology is not sufficient to ensure scaling but must be accompanied with awareness creation and backstopping.
* Scaling strategies need to be revisited frequently based on overall project objectives as the context and the environment may change from time to time.
* Scaling takes time, and adaptation is often needed for sustainable adoption.